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Relative status of furbearer species in Manitoba's registered trapline area determined through questionnaire analysis 1987-88.

By Johnson, C.S., 1988

Manitoba
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Relative status of furbearer species in Manitoba's registered trapline area determined through questionnaire analysis 1987-88.

Johnson, C.S. 1988.

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Department of Natural Resources
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ABSTRACT

A trial questionnaire to gather furbearer population information from registered trapline (RTL) trappers was tried in the 1987/88 trapping season. Nine of 14 areas had high or acceptable response rates while the remainder returned few or no questionnaires. There were 483 respondents (17% of RTL trappers) representing 227 traplines (25% of lines). All species populations remained stable with virtually no changes in level from the previous year. Some species were essentially absent from the RTL area, some were low but most were common. Population estimates for lynx (Lynx canadensis) and wolverine (Gulo gulo) compared favorably with estimates gained through other methods.

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INTRODUCTION

The lack of and difficulty in collecting field information on furbearer populations and trends in Manitoba prompted the initiation of a questionnaire administered to Registered Trapline (RTL) trappers. The ideal time to administer it would be after they have surveyed or begun trapping their lines.

A pilot study, based on a program already in existence in the Yukon (pers. comm., Slough, B., Fur Biologist, Yukon Department of Natural Resources) was carried out in the 1987-88 trapping season to determine whether a large number of trappers or traplines could be surveyed and if the information returned was reliable and useful (ie. not exaggerated to influence season or quota setting).

METHODS

Questionnaires (Appendix I) addressed to each trapper as listed in the 1986-87 trapper file were given or sent to the fourteen Trapline Officers (TLO) in different registered trapline areas (RTLs) of the province (Fig. 1) in mid November 1987, after trapping was well underway. A supply of blank ones was included for new trappers. TLOs were to interview at least one trapper per trapline and complete a form with them. They were also to fill one out themselves with their knowledge of the area and return the completed forms. Tallies for each trapline section and total sample were done. Classes and relative values/class were arbitrarily set using the following scale.

Abundant(High) - 3 points
Common - 2 points
Scarce (Low) - 1 point
Not Present - 0 points

More than last year - 1 point
Same as last year - 0 points
Less than last year - -1 point

The number of respondents for each category was used to calculate the average overall estimate for each section and the RTL area. The averages were classified as they fell into the following categories.

0 - .5 - Not Present
.6 - 1.5 - Scarce (Low)
1.6 - 2.5 - Common
2.6 - 3.0 - Abundant (High)

< -.5 - Less than last year
.5> > -.5 - Same as last year
> .5 - More than last year

The number of lynx (Lynx canadensis) and wolverine (Gulo gulo) taken by respondents was tallied as well as estimates of the number of these two species still remaining on the trapline. An estimate of the total RTL harvest and the population numbers was extrapolated using the total number of lines occurring in the province.

RESULTS

There were 483 respondents out of an average potential of 2876 (3 yr. avg.). These respondents represented 227 of 862 traplines including seven fur blocks (each block was considered as one line). Twenty-one of 44 trapline sections were represented (Fig.1). This broke down to 25% of the lines being sampled and approximately 17% of RTL trappers. Two sections, Island Lake and Brochet, returned questionnaires for near 100% of the lines.

Overall, no species was considered abundant (Table 1). Badger (Taxidea taxus), coyote (Canis latrans), arctic (white) fox (Alopex lagopus) and raccoon (Procyon lotor) were essentially absent

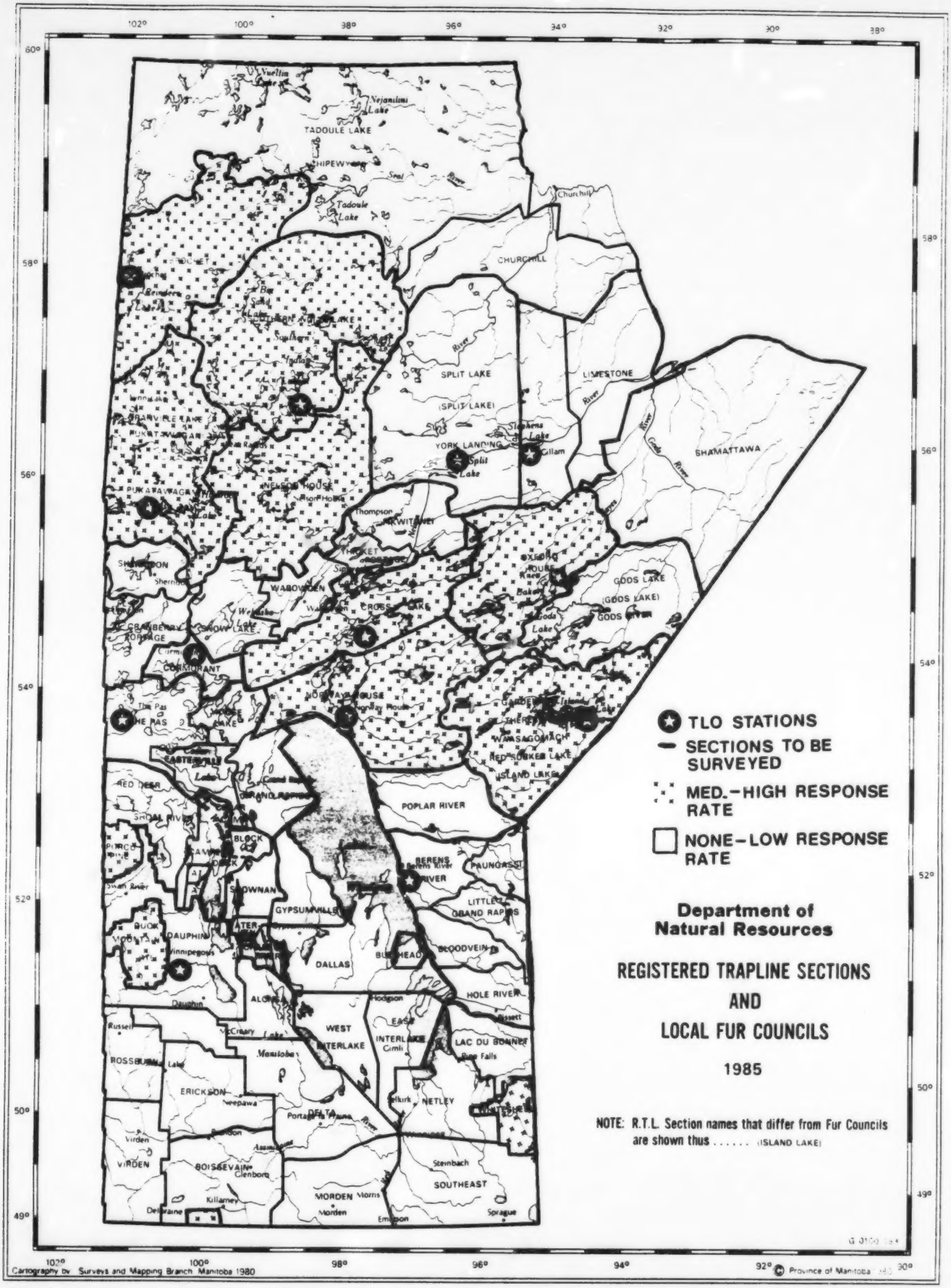
TLO STATIONS
SECTIONS TO BE SURVEYED
MED.–HIGH RESPONSE RATE
NONE–LOW RESPONSE RATE
Department of Natural Resources
REGISTERED TRAPLINE SECTIONS AND LOCAL FUR COUNCILS
1985
NOTE: R.T.L. Section names that differ from Fur Councils are shown thus ..... (ISLAND LAKE)
Cartography by Surveys and Mapping Branch Manitoba 1980
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Fig.1: Trapline questionnaire sampling areas and response rates.

from the RTL area or had extremely low population levels as most sections were outside the range of these species. Black bear (Ursus americanus), fisher (Martes pennanti), lynx, marten (Martes americana) and wolverine were considered to have low population levels although there were variations between sections. Beaver (Castor canadensis), ermine (Mustela erminea), red fox (Vulpes vulpes), mink (Mustela vison), muskrat (Ondatra zibethicus), otter (Lutra canadensis), red squirrel (Taimaisciurus hudsonicus) and wolf (Canis lupus) were considered common furbearers and snowshoe hare (Lepus americanus), mice or small mammals and grouse or ptarmigan were considered common prey species although these levels varied from section to section as well.

Results for selected trapline sections with a sufficient number of responses are presented on Table 1. Beaver were considered abundant in the Whiteshell and Nelson House sections and common in the remainder. Squirrel populations were high in Norway House, Nelson House, Pukatawagan and Island Lake sections. Lynx were considered common in Pukatawagan and Nelson House sections with all other areas reporting low or absent populations. Snowshoe hare were also considered high in these two areas. Prey species had generally common classifications in most sections. The level of marten populations was reported common or low. Fisher were also classed as common or low. Overall population levels for all species in the RTL remained the same as the previous year (Table 2).

Respondents reported ten wolverine and 88 lynx being caught (Table 3). This is an estimate of .1 wolverine and .4 lynx being caught per line. The harvest estimates for all RTL areas in

Table 2: Trends in furbearer populations compared to 1986/87 for selected trapline sections 1987/88.

Section	RTL	WHITESHELL	NORWAY HOUSE	ISLAND LAKE	DUCK MTN.	PORCUPINE	CROSS LAKE	OXFORD HOUSE	PUKATAWAGAN	NELSON HOUSE	BROCHET	SOUTH INDIAN L.
N # LINES	436	16	65	129	19	10	33	33	63	18	19	29
RESPONDED TOTAL #	197	12	20	42	11	9	21	21	24	12	11	22
LINES	862	25	41	42	28	15	61	62	46	50	11	52
SPECIES												
BADGER	0*	0	0	0	0	0	0	0	0	0	0	0
BEAVER	0	0	0	0	0	0	0	0	0	0	0	0
BLACK BEAR	0	0	0	0	-	0	0	0	0	0	0	0
COYOTE	0	0	0	0	-	0	0	0	0	0	0	0
ERMINE	0	0	0	0	0	0	0	0	0	0	0	-
FISHER	0	0	0	0	0	0	0	0	0	0	0	0
RED FOX	0	0	0	0	0	0	0	0	0	0	0	0
ARCTIC FOX	0	0	0	0	0	0	0	0	0	0	0	-
LYNX	0	0	0	0	0	0	0	0	0	0	0	0
MARTEN	0	+	0	+	0	0	0	0	0	0	0	0
MINK	0	0	0	0	0	0	0	0	0	0	0	0
MUSKRAT	0	0	0	0	0	0	0	0	+	0	0	0
OTTER	0	0	0	0	0	0	0	0	0	0	0	0
RACCOON	0	0	0	0	0	0	0	0	0	0	0	0
SQUIRREL	0	0	0	0	0	0	0	0	+	0	0	0
WOLF	0	0	0	0	0	0	0	0	0	0	0	0
WOLVERINE	0	0	0	0	0	0	0	0	0	0	0	0

Table 3: Wolverine and lynx caught by respondents and population estimates

Trapline Sections	N	No. Lines	Wolverine Caught	No. /Line	Estimate /Section	Lynx Caught	No. /Line	Estimate /Section
WHITESHELL	16	12	0	0	0	0	1.1	28
NORWAY HOUSE	65	20	2	.8	36	15	4.7	212
ISLAND LAKE	129	42	2	1.0	45	20	5.0	225
TURTLE MTN.	4	3	0	0	0	0	0	0
DUCK MTN.	19	11	0	0	0	2	.7	20
PORCUPINE	10	9	0	0	0	0	.2	3
CRANE RIVER	2	FUR BLOCK	0	0	0	0	0	0
WATERHEN	7	FUR BLOCK	0	0	0	0	0	0
SKOWNAN	1	FUR BLOCK	0	0	0	0	0	0
CAMPERDUCK	5	FUR BLOCK	0	0	0	0	0	0
SHOAL RIVER	7	FUR BLOCK	0	0	0	0	0	0
CROSS LAKE	33	21	1	.9	56	12	1.7	107
OXFORD HOUSE	33	21	3	1.0	63	4	.2	13
PUKATAWAGAN	63	24	2	.6	27	22	3.6	164
NELSON HOUSE	18	12	0	1.5	80	5	1.5	85
SPLIT LAKE	7	4	0	2.0	128	2	.8	51
LIMESTONE	3	3	0	1.0	0	0	2.0	36
SHAMATTAWA	1	1	0	0	0	0	0	0
BROCHET	19	12	0	.5	6	9	.4	5
LAC BROCHET	2	FUR BLOCK	0	0	0	0	0	0
SOUTH INDIAN LAKE	29	22	0	.6	34	0	1.4	19
TOTAL	476	225	10	.7	142.8	88	2.3	518
TOTAL RTL	2876	904	10	.7	633	88	2.3	2079

1987-88 were 40 wolverine and 350 lynx. There were 400 lynx reported taken as of May 31, 1988 and 56 wolverine reported as of April 30, 1988 for the entire province. Respondents reported 164 wolverine and 522 lynx still on their traplines or .7 wolverine/trapline and 2.5 lynx/trapline for the RTL area. Population estimates indicate 633 wolverine and 2079 lynx for the RTL area. Calculation of home range estimates for the estimated wolverine population was 471 km^2 for the sections of greatest concentration. Dauphiné (pers. comm. Charles Dauphiné, Canadian Wildlife Service) indicated wolverine home ranges vary in size from 265 km^2 in the southwest Yukon to 625 km2 in northern Alaska. He also indicated the home range sizes changed as one moved east due to habitat and food availability. The estimate of 471 km^2 for Manitoba is within these limits and would seem to indicate a reliable population estimate.

DISCUSSION

The eleven sections or nine TLO areas that were intensively sampled provided usable and important field information. It is suggested that this procedure become an annual or biannual activity so that trends in furbearer populations can be monitored and abberations can be identified before they become a problem. Survey information and reporting of conditions on the trapline have been incorporated into the rules and conditions of RTL management since registered lines were established. Therefore, it is the trappers responsibility to provide this information on request.

This report should, however, be used as a guideline only to indicate population trends and should not be used as fact. All data

were dependent upon the interpretation by the trapper, the TLO who recorded it and the biologist analyzing it without reliable verification in the field to confirm or dispute it. The study was not set up using statistical principles; therefore, statistical tests are not applicable nor valid. The data should only be used as an indicator.

It is suggested that those TLOs who failed to return questionnaires be encouraged to be more diligent in completing this task and be educated in the importance of it. Perhaps hints from those TLOs who surveyed 100% of lines would be useful.

The results of this pilot study show stable furbearer populations overall although, a more sensitive method of detecting changes in the population levels may be needed. Most species had good good population levels (common) with no concerns for depletion of the stock at present. The common rating for beaver, however, contradicts the interpretation by Natural Resources staff who generally consider the beaver population to be high at present. Wolverine will always be considered as having low population levels due to their large home ranges. Therefore, relative harvest rates should be monitored. Fisher (low) should be monitored more closely to avoid overharvest.

Estimates of harvest and population numbers compare favorably with the actual harvest figures and population estimates arrived at by using home range data from other sources. In summary, such an annual survey as presented here will provide useful information showing the status and trends of furbearer populations in different areas as well as provide information for management purposes at low cost. It will also encourage trappers to take a more active part in

the management of their lines.

It is recommended that this project continue on an annual or biannual basis and perhaps be expanded to other areas if a high response rate can be maintained.

APPENDIX
TRAPPER'S QUESTIONNAIRE